To Strike or Not to Strike?

House-Staff Attitudes and Behaviors During a Hospital Work Action

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Work actions by house staff are an infrequent response to sometimes difficult working conditions, but they can have a notable effect on institutional cohesiveness and represent a challenge to traditional notions of medical ethics. To determine the extent of participation in a hospital-wide doctors' strike and factors associated with participation, we surveyed 432 house officers at a university-affiliated public hospital where a contract dispute had recently led to a 4-day work action. Of 257 respondents, 69% approved of the strike and 50% participated in it. Both strikers and nonstrikers agreed that quality of care and specific contract issues were important precipitants of the event. By logistic regression, factors independently associated with strike participation ($P<.05$) included being unmarried, training in internal medicine or psychiatry, being in earlier stages of training, being assigned to an outpatient service at the time of the strike, holding a favorable view of physician activism, and perceiving nurses, faculty, peers, and the public to have favored the strike. These associations may provide a basis for understanding the individual and social determinants of house-staff strike activity.

(Kravitz RL, Linn L, Tennant N, Adkins E, Zawacki B: To strike or not to strike? House-staff attitudes and behaviors during a hospital work action. West J Med 1990 Nov; 153:515-519)

Strikes and work actions by practicing physicians are occurring with increasing frequency worldwide,[1-3] but in the United States most strikes have been conducted by physicians-in-training. These events may serve a useful purpose by drawing attention to problems within training centers, but they also have the potential for exacerbating institutional tensions and producing adverse health outcomes. Understanding the genesis of these affairs may have implications for improving organizational effectiveness and for the prevention of future conflicts.

In January 1988, house staff at a large public hospital in the western United States conducted a four-day work action. The event followed a period of protracted negotiations with the county government. County officials had proposed to transfer fiscal and administrative responsibility for the house officers to the affiliated university; house staff argued that such "outcontracting" would damage their ability to bargain collectively and to retain control over discretionary patient care funds. Negotiations intensified, and when the hospital census dropped suddenly as a result of an unrelated nurses' strike, the house-staff organization called for a partial walkout. From January 29 to February 2, physicians marched in picket lines and reduced the amount of nonemergency services they provided. They returned to work when a state superior court judge ordered the county to implement outcontracting on a one-year experimental basis only, during which time the cost-effectiveness of the new arrangements could be evaluated.

Little is known about the factors that influence whether physicians choose to strike. Although strikes by nonphysicians have been studied extensively,[4-6] the conclusions may not apply, as withholding medical services raises complex ethical issues and violates certain professional norms.[7] Two studies of practicing physicians in Canada related participation in a major regional strike to higher income, political conservatism, medical association membership, and professional dissatisfaction.[8,9] No work, however, has examined the factors associated with participation in strikes and work slowdowns by US house staff.

In this study we addressed four questions. First, what was the magnitude of participation in the strike* among house staff in four specialties, and to what degree did "participants" actually withhold services from patients? Second, what were the major precipitants of the strike as perceived by house staff? Third, to what degree did approval of the strike correlate with participation in it? Fourth, what demographic, professional, and attitudinal characteristics were associated with approval of the strike, self-reported strike participation, and a high-level commitment to the strike?

Subjects and Methods

Although the study was conceived shortly after the work action occurred, the principal investigators spent several months negotiating the scope and content of the study with hospital management and with union officials. After gaining final approval in the spring of 1988, we mailed questionnaires to all 457 interns, residents, and fellows training at the facility in internal medicine, surgery, obstetrics-gynecology, and psychiatry. Because of resource constraints, we were unable to sample all clinical departments, but those chosen fielded the four largest training programs at the facility. Interns who were training in internal medicine for one year in preparation for training in other specialties—transitional interns—could not be distinguished from those who planned to complete the three-year program. Because of the sensitivity of the issues and in

*Although the word "strike" implies a more complete withholding of services than "job slowdown" or "work action," in this article the terms will be used more or less interchangeably.

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deference to hospital and union concerns, all questionnaires were strictly anonymous. Although subjects were provided with a precoded postcard for return under separate cover, inconsistent compliance made it impossible to determine exactly who had responded. A $2 payment was included with the initial mailing, and follow-up procedures included two letters and a phone call. After eliminating 25 subjects who were on vacation or on outside rotations during the strike, 257 usable responses were obtained (net response rate, 60%). (Because the various clinical departments could not or would not confirm the accuracy of the master mailing list, this figure represents a lower limit for the true net response rate.) Physicians training in internal medicine and psychiatry responded at a higher rate than those in surgery and gynecology (62% versus 47%), but respondents and nonrespondents did not differ by gender.

Instrument and Scales

Strike attitudes and behaviors were measured by asking subjects whether they approved of the strike (5 = strongly approved, 1 = strongly disapproved), whether they had participated in it, and whether their behavior was consistent with their preferences (1 = participated and wanted to, 2 = participated but did not want to, 3 = did not participate but wanted to, 4 = did not participate and did not want to). Subjects were also asked to estimate the percentage by which they actually reduced their working hours and to specify what strike-related activities they had participated in, if any. They were considered to have reduced their working hours "substantially" if the percent reduction was at least 25%.

Each house officer was asked to rate on a one-to-five scale the importance of six possible underlying causes of the work action: low salaries, heavy workloads, patient overcrowding, poor working conditions, difficulties in providing good quality of patient care, and contracting out of services by the county to the university. These six issues were generated through discussions with house staff, faculty, nurses, and hospital management. Space was provided for house staff to make additional comments.

With respect to factors possibly associated with striking, subjects were questioned about demographic and professional background (age, race, sex, marital status, level of educational debt, specialty, level of training), attitudes (position on the political spectrum, view of physician activism, religiosity), degree of perceived support by significant others, job satisfaction, and barriers to participation (assignment to the wards or intensive care unit at time of strike).

Demographic and professional characteristics were queried in a standard manner. Position on the political spectrum was rated on a five-point scale (5 = conservative, 1 = liberal). The view of physician activism was measured by summing the number of activities subjects deemed "proper" for physicians to participate in (placing "activist" pamphlets or posters in wards or clinics, wearing buttons with activist slogans while on duty, participating as physicians in marches or other demonstrations, and joining unions). Scores on this scale ranged from 0 to 4. Religiosity was rated from extremely religious (5) to not at all religious (1). Degree of perceived support for the work action was measured by counting up the number of persons or groups perceived to have "approved" or "strongly approved" of the strike (most of the residents you work with, most of the nurses you work with, most of the attending faculty in your specialty, the general public; range, 0 to 4). Job satisfaction was computed as the mean of two items: How would you rate your overall satisfaction with your experience as a house officer at this institution (5 = extremely satisfied, 1 = very dissatisfied)? and Would you recommend this institution to applicants as a place to train in your specialty (5 = definitely yes, 1 = definitely not)? For the purpose of analysis, house officers with job satisfaction scale scores above the mean were considered to have "high satisfaction"; all others were considered to have "low."

Subjects failing to complete any item in a scale were considered missing with respect to that scale. Cronbach α-reliability coefficients for all multi-item scales ranged from 0.60 to 0.85.

Statistical Analysis

Strike approval and participation rates were determined first for the entire sample and then among demographic, professional, and attitudinal subgroups; differences were assessed by computing χ^2 and Mantel-Haenszel χ statistics as indicated using the SAS statistical package.[10] To determine the strength of independent associations between subject characteristics and strike approval, strike participation, and "substantial" hourly reductions, variables significant in the bivariate analyses were entered into three fixed multivariate regression models. The first model used multivariate linear regression to explain the variance in strike approval (1 to 5 scale). The second and third models used multivariate logistic regression to compute the odds of subjects having participated in the strike (1 = yes, 0 = no) and having reduced their work hours substantially (1 = $\geq$25% reduction, 0 = $<$25% reduction). (See Table 3 for specification of independent variables.)

Results

Of 257 respondents, 69% "strongly" or "somewhat" approved of the strike (Table 1). Rates of approval were highest among psychiatrists and lowest among surgeons. Approval of the strike did not automatically imply participation: of those who approved, 63% participated in the strike compared with 10% of those who disapproved or who were uncertain (data not shown). Of those who approved, 29% cut their work hours by at least 25% compared with none of those who did not approve.

TABLE 1.—*Strike Approval and Strike Participation*

Physician Respondents	Strike Approval: Approved, No. (%)	Strike Approval: Disapproved or Uncertain, No. (%)	Strike Participation: Participated; Wanted to, No. (%)	Strike Participation: Participated; Did Not Want to, No. (%)	Strike Participation: Did Not Participate; Wanted to, No. (%)	Strike Participation: Did Not Participate; Did Not Want to, No. (%)
All subjects	175 (69)	79 (31)	102 (40)	24 (10)	48 (19)	79 (31)
Internal medicine	87 (69)	39 (31)	53 (42)	14 (11)	22 (17)	38 (30)
Surgery	19 (45)	23 (55)	4 (9)	3 (7)	8 (19)	28 (65)
Obstetrics-gynecology	20 (77)	6 (23)	4 (15)	0 (0)	13 (50)	9 (35)
Psychiatry	49 (86)	8 (14)	41 (72)	7 (12)	5 (9)	4 (7)

The overall strike participation rate was 50%, but withdrawal of services was incomplete: less than 1% of striking subjects stopped answering their pages, and only 26% of strikers reduced their working hours by more than half (median 25%, range 0% to 100%). Other behaviors reported by strike participants included helping to organize the strike (20% of strikers), speaking out in favor of the strike (66%), and marching in picket lines (82%).

Most subjects considered the conflict to have been precipitated by several issues: difficulties in providing good quality of care (86%), the county's plan to turn house-staff contracts over to the university (80%), patient overcrowding (78%), poor working conditions (74%), and heavy workloads (56%). Only 11% thought that salary was an "extremely important" or "very important" issue. Work action participants and nonparticipants generally shared the same views about the underlying causes of the event. House staff who supported the strike, however (regardless of behavior), were more likely to report concerns about quality of care as having been important (91% versus 78%, $P<.01$).

Of 126 strike participants, 24 (19%) reported that they "did not really want to participate" (Table 1). Conversely, of 127 nonparticipants, 48 (38%) said that they had "really wanted to participate." The discordance between attitudes and action was particularly pronounced for the 26 trainees in obstetrics-gynecology, among whom 50% "did not participate in the strike but really wanted to." The corresponding percentages for other specialties ranged from 9% (psychiatry) to 19% (surgery) (Table 1). Among all participants, 65% said that they would strike again under similar circumstances.

In the bivariate analysis, nonfellows, trainees in internal medicine or psychiatry, and those with a greater educational debt were more likely than their peers to register strong approval of the strike (Table 2). Physicians assigned to outpatient or consultative services during the month of the work action were also more likely to approve of it. Attitudes associated with greater strike approval included more liberal politics, lower job satisfaction, greater perceptions of support for the strike, and more frequent endorsement of physician activism (Table 2).

Variables related to strike approval were uniformly associated with strike participation, substantial reductions in working hours, or both. Younger age, minority race, and being unmarried were associated with strike participation but not approval (Table 2).

In the multivariate analysis we determined the independent association of ten demographic, professional, and attitudinal characteristics with strike approval, self-reported strike participation, and substantial reduction of working hours (Table 3). Strike approval was related to minority race, liberal politics, stronger endorsement of physician activism, and more frequent perceptions of support for the strike (multiple R^2, 0.33). Strike participation was also associated with greater activism and perceptions of support but, in addition, was related to being unmarried, being a nonfellow, working on an outpatient or consultative service during the strike, and training in internal medicine or psychiatry. The model correctly classified subjects as strikers or nonstrikers 79% of the time. Curtailing customary working hours by at least 25% was independently associated with being a nonfellow, working on an outpatient or consultative service, training in medicine or psychiatry, and holding a liberal position on the political spectrum. Neither strike approval nor behavior was related to job satisfaction.

Discussion

Much of the care provided to medically indigent persons in public hospitals is delivered by physicians-in-training, often under demanding conditions.[11] It is not surprising that these physicians have periodically organized in defense of their interests and those of their patients. Nevertheless,

TABLE 2.—*Approval and Participation in the Strike Among Subgroups of Physicians (n=257)**

Characteristic	Percent Strongly Approved	Percent Participated	Percent Substantially Reduced Hours
Age, years			
Younger than 29 (n=72)	46	61	28
29 to 32 (n=124)	44	45	13
Older than 32 (n=61)	45	43†	22
Level of training			
Intern (n=29)	52	59	18
Resident (n=149)	49	59	30
Fellow (n=78)	32†	27‡	5‡
Work area time of strike			
Ward (n=178)	46	48	19
Intensive care unit (n=22)	18	32	0
Clinic or consult service (n=53)	52†	64†	38‡
Specialty			
Surgery or gynecology (n=69)	34	16	1
Internal medicine or psychiatry (n=184)	49†	62‡	29‡
Gender			
Male (n=192)	42	49	19
Female (n=62)	52	50	27
Marital status			
Married (n=126)	42	49	15
Not married (n=127)	47	58§	26
Race			
White (n=171)	42	45	18
Other (n=83)	49	59†	26
Family income			
>$45,000 (n=97)	46	48	21
≤$45,000 (n=157)	43	50	21
Level of educational debt			
>$30,000 (n=103)	59	59	24
≤$30,000 (n=150)	35‡	43§	19
Religiosity			
At least somewhat religious (n=138)	42	50	20
Not very or not-at-all religious (n=116)	47	48	22
Position on political spectrum			
Liberal (n=99)	57	58	32
Moderate (n=65)	43	55	20
Conservative (n=89)	33‡	36§	8‡
Job satisfaction			
High (n=131)	37	44	14
Low (n=123)	53†	55†	28§
Number of significant groups perceived to support strike			
0 to 1 (n=44)	14	20	12
2 (n=112)	44	45	17
3 to 4 (n=97)	58‡	68‡	29‡
Number of "activist" activities deemed proper			
0 to 1 (n=58)	16	24	7
2 to 3 (n=111)	44	50	22
4 (n=85)	65‡	66‡	28‡

*Total number of respondents differs for each characteristic because some respondents did not answer all of the questions.
†$P<.05$.
‡$P<.001$.
§$P<.01$.

for a physician to go on strike means at least a temporary retreat from the traditional Hippocratic notions of beneficence.[12] For house officers as for other workers, strikes and work actions occupy one end of a continuum that includes dialogue, negotiation, and coercion. The decision of an individual physician to strike is complex, involving questions of necessity, ethics, and personal risk. Because of the cross-sectional and retrospective nature of this study, associations do not imply causation. Our results, however, are consistent with the hypothesis that house officers at one institution decided whether or not to strike based partly on a combination of background characteristics; perceptions of peer, nurse, faculty, and public support; political attitudes; and the perceived absence of practical barriers. With few exceptions, the findings are in accord with studies of nonphysicians that have related strike participation (specifically) and high-risk activism (generally) to these same four elements.[5,6,13]

We found that although approval of the strike among respondents was widespread, house officers in our sample were generally reluctant to withdraw services in a manner that would significantly impair the delivery of patient care, even though such behavior would have provided a more effective lever on the hospital administration. Strike participants continued to respond to their pages, and relatively few shortened their workday by a substantial margin.

TABLE 3.—*Multivariate Regression of Strike Approval, Strike Participation, and Service Withdrawal as a Function of Demographic, Professional, and Attitudinal Characteristics*

Characteristic	β-Coefficient (Standard Error)*		
	Degree of Approval	Reported Strike Participation	Substantial Reduction of Working Hours
Minority race	0.46 (0.16)†	0.46 (0.36)	0.34 (0.43)
Married	−0.20 (0.15)	−0.71 (0.33)‡	−0.31 (0.41)
Fellow (v intern or resident)	−0.20 (0.17)	−1.61 (0.39)§	−2.62 (0.67)§
Outpatient or consult service at time of strike	0.23 (0.18)	0.95 (0.42)†	1.71 (0.50)‖
Surgical or gynecologic specialty	0.12 (0.19)	−1.88 (0.44)§	−3.00 (1.08)‖
High educational indebtedness (>$30,000)	0.24 (0.15)	0.40 (0.34)	−0.02 (0.42)
Liberal politics (v moderate or conservative)	0.20 (0.09)‡	0.29 (0.39)	1.46 (0.53)‖
Number of activist activities deemed proper (0 to 4 scale)	0.30 (0.06)§	0.30 (0.14)‡	0.001 (0.18)
Job satisfaction below mean	0.25 (0.15)	0.33 (0.34)	0.49 (0.43)
Number of groups perceived to favor strike (0 to 4 scale)	0.35 (0.09)‖	0.52 (0.21)†	0.14 (0.24)
Multiple R^2	0.33	..	..
Percent of cases correctly classified, %	..	79	83

*Reported coefficients are obtained from multivariate linear regression analysis (strike approval) and from multivariate logistic regression analysis (strike participation and reduction in working hours by at least 25%).
†$P<.01$.
‡$P<.05$.
§$P<.0001$.
‖$P<.001$.

Whether cognizant of their critical value to patients or fearful of repercussions from superiors, none of the 22 physicians assigned to the intensive care units during the strike curtailed their working hours by more than 25%.

That some house staff approved of the strike yet did not participate and others disapproved and participated probably reflects serious ambivalence about the wisdom and propriety of striking. The findings argue indirectly for the importance of perceived risk (in the case of those who wanted to strike but did not) and peer pressure (in the case of those who did not want to strike but did). An alternative explanation is that some subjects in this retrospective survey revised their expressed opinions to coincide with their perceptions of the outcome.

Specialty, level of training, and work assignment were consistently related to strike behavior. Though not a part of the formal study, interviews with house staff and administrators revealed that program directors in surgery and gynecology displayed greater antagonism towards the strike than did directors in medicine and psychiatry. Fellows may have been less likely to strike because they thought they had more to lose as a result of participating in an activity condemned by their superiors, because they had less stake in the issues, or because they tended to identify more with the views of the administration and faculty than with those of less advanced trainees. Finally, house staff assigned to the wards and intensive care units may simply have been less "biographically available"[13] for participation in strike activities. Increased clinical demands may have also been a factor in explaining why surgery and gynecology house staff were less likely to strike.

Studies of activism in other settings have documented the importance of ideologic commitment and perceived norms.[13,14] Strike participants in our study had liberal political views and were more concerned than nonparticipants about problems with quality of care at the medical center. They were also more likely to perceive co-workers, attending physicians, and the public to have favored the work action. Although their perceptions may have been biased, these findings suggest that house staff may have struck partly out of deference, loyalty, or fear of ostracism by significant others.

Approval of the strike was largely related to political attitudes and perceptions of peer support. In contrast, the strongest independent correlates of strike behavior were level of training, specialty, and work assignment at the time of the strike. Evidently, what house officers *did* was much more constrained by the practical conditions of their professional lives than what they *thought*.

Surgeons and gynecologists were less likely to respond to the survey than trainees in internal medicine and psychiatry. If the behavior of respondents in surgery and gynecology was representative of the behavior of nonrespondents, the overall strike participation rate reported in this study was probably inflated. The main results were robust enough to withstand considerable response bias, however. For example, even if two thirds of nonresponding surgeons and gynecologists participated in the strike and two thirds of nonresponding internists and psychiatrists did not, the strike participation rate difference would still favor internists and psychiatrists by 4%.

The work action reported here was promoted by circumstances unique to the medical center where it occurred. In addition, the study was limited to selected specialties. Nevertheless, similar social dynamics may be generalizable to house staff in other hospitals, particularly because the pat-

terns are consistent with accepted theory and existing empiric data.[9,13]

Physicians' strikes and work slowdowns may be an important sign of serious trouble with patient care or professional morale. They are, however, a late sign, and they can potentially impose serious morbidity on patients. This study shows that house staff can probably be deterred from participating in strikes by strong social pressure and by a reliance on their reluctance to endanger patients. If the underlying sources of discontent are not addressed, however, patient care may suffer in other ways. The strike in the present case may indeed have been unavoidable, but more conspicuous efforts by county and university officials to listen and respond to house-staff concerns might have helped to avert an incident that in the end engendered much bitterness and accomplished little.

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